

Heat treatment process for bearing component involves carbonitriding at specified temperature, cooling, re-heating and hardening at lower temperature

Publication number: DE10254635

Publication date: 2003-06-12

Inventor: OHKI CHIKARA (JP)

Applicant: NTN TOYO BEARING CO LTD (JP)

Classification:

- international: C21D1/78; C21D9/40; C23C8/32; C23C8/80; F16C33/30; F16C33/62; C21D9/36; C21D1/78; C21D9/40; C23C8/06; C23C8/80; F16C33/30; F16C33/62; C21D9/36; (IPC1-7): C21D1/18; C23C8/32; F16C33/30

- European: C21D1/78; C21D9/40; C23C8/32; C23C8/80; F16C33/30; F16C33/62

Application number: DE20021054635 20021122

Priority number(s): JP20010364516 20011129; JP20020194775 20020703; JP20020194793 20020703; JP20020194804 20020703; JP20020194921 20020703

Also published as:



US2005205163 (A1)

US2003123769 (A1)

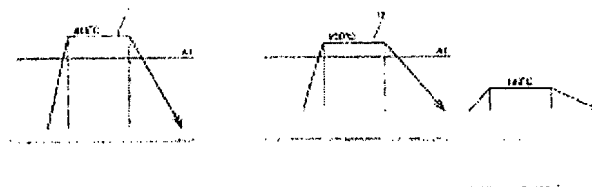
KR20030044797 (A)

CN1304625C (C)

Report a data error here

Abstract of DE10254635

The steel of the component is carbonitrided at a temperature exceeding the A1 transition temperature, then cooled below it. The steel is re-heated to a hardening temperature (T2), no less than the A1 transition temperature, but less than the carbonitriding temperature. The steel is hardened. Preferred Features: The steel is hardened at a temperature of 790-830 deg C. Steel composition Steel remote from the hardened area contains, all on a wt. % basis: 0.6-1.2 C, 0.15-1.11 Si and 0.3-1.5 Mn. Under 2 wt. % Cr is included. Hydrogen content is below 0.5 ppm. The component includes a carbonitrided layer and austenitic grains exceeding a JIS Grain Size of No. 10. An Independent claim is included for a bearing component with austenitic grains of mean size not exceeding 8 microns.



Data supplied from the esp@cenet database - Worldwide